



# Food and Nutrition

## Focus On

- Food and Nutrients
- Balanced Diet
- Cooked and Raw Food
- Preservation of Food

## Teacher's Aid

- Posters and charts on healthy and junk food.

### ▼ Here We Go...

Write the names of four healthy and four junk food.

Healthy food	Junk food
_____	_____
_____	_____
_____	_____
_____	_____

## Food and Nutrients

Food is necessary for all living things to live, grow and stay healthy. It gives us energy to work, study, think, talk, walk, play, run and do many other activities.

Our body needs some particular substances to grow and become strong. These are called **nutrients**. We get these nutrients from our food. These nutrients protect us from diseases, give us energy to do our daily activities and to grow stronger and healthier.

Our body needs five major nutrients. These are carbohydrates, fats, proteins, vitamins and minerals. Besides these, roughage is also needed for our body to keep the digestive system functioning well. Plenty of water is also essential for our body.

## Carbohydrates

We get energy to do our activities from **Carbohydrates**. Our basic food items like rice,

chapati, potato, sugar, bread, banana and orange have plenty of carbohydrates. Milk also has some carbohydrates. People doing lot of physical work like farmers, labourers, sportspersons etc. need lot of carbohydrates to give them energy.



Carbohydrates



Fats

### Fats

Some examples of **fat** rich food items are oil, butter, cheese, ghee, nuts, meat, fish etc. Fat gives us more energy than the carbohydrates. The extra fat stored under the skin keeps the body warm. They are stored sources of energy in the body. Eating lot of fat rich food can make you obese, which is not a healthy sign.

### Proteins

Food items rich in **protein** are milk, pulses, eggs, fish, meat and cheese. Proteins are called the **building blocks** of our body. Proteins are needed to build muscles, to make them strong, to grow and to repair the parts which are damaged due to injury or sickness. Food items rich in proteins are often called the **body building food**.



Proteins

### Vitamins and Minerals

Some food nutrients are required by our body for its normal functioning and to fight against diseases. They are **vitamins** and **minerals**. They are needed in very small amounts. They are called **protective food**.



Vitamins and Minerals

There are several vitamins and minerals that our body needs. Calcium helps in the formation of teeth and bones. Milk, cheese, eggs etc. are rich in calcium. Iron is very Important for the blood. We get iron from green leafy

#### HOTSPOT

- Who needs more carbohydrate?  
(a) a clerk      (b) a labourer
- Who needs more protein?  
(a) teen aged boy  
(b) An oldman of 80 yrs.



vegetables, apples and guavas. Sodium, potassium, iodine are some other minerals that are needed by our body.

We need vitamin A for good vision, health, skin and growth. Some food items that contain vitamin A are carrots, green vegetables and dairy products. For the good absorption of mineral iron, we need vitamin C. Citrus fruits and vegetables are good sources of vitamins C.

We get vitamin D from sunlight, cabbage and soyabean oil.

## Let's Recall

Match the following :

### Column A

1. For growth and good health
2. Vitamins and minerals
3. Energy giving food
4. Stored source of energy
5. Minerals needed for teeth and bones

### Column B

- (a) carbohydrates
- (b) nutrients
- (c) calcium
- (d) protective food
- (e) fat

## Roughage

We eat various kinds of food such as, cereals, fruits and vegetables. All these things contain **roughage** or **fibres** that have no food value. Roughage helps us in proper functioning of our digestive system. Corn, salad, sprouted seeds such as grams and unsieved flour contain good amount of roughage.



Roughage



## Water

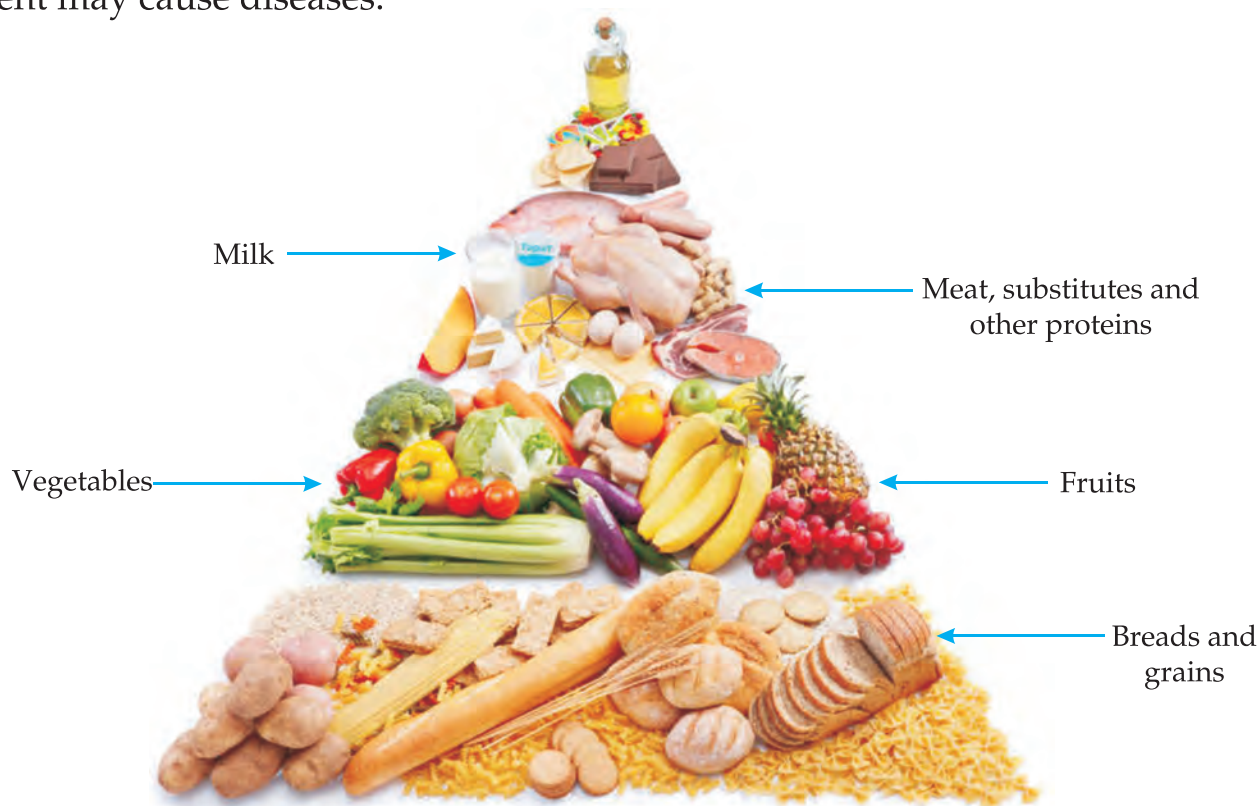
**Water** is essential for proper functioning of our body. Most of the food we eat, especially fruits and vegetables, contain water. We need to drink 6-8 glasses of water everyday.

### For the Teacher

Encourage children to have a discussion on healthy and junk food. Display posters too.

## Balanced Diet

The food that we eat on a regular basis forms our diet. A balanced diet contains balanced amount of all the nutrients : carbohydrates, fats, proteins, vitamins and minerals together with roughage and water. We need to take a **balanced diet** for healthy growth and development of our body. Eating too much or too little of any nutrient may cause diseases.



A balanced diet pyramid

We should have a balanced diet to protect ourselves from diseases.

### Fact Byte

- ❖ Too much nutrients or too little nutrients means lack of a balanced diet that leads to malnutrition. If we take too much carbohydrates and a very little fruits and vegetables, it can lead to malnutrition.

### Find Out

What was the nutritional value of your today's breakfast?

### A Step Ahead

It was 1747, the people who were on long sea voyages developed a painful, bleeding disorder scurvy. Dr. James Lind, a physician in the British Navy, performed the first scientific experiment in the field of nutrition. He selected 12 men suffering from scurvy, and divided them into six pairs. All the six pairs were given different additional diets. Some were given sea water, some were given vinegar and some were given oranges and lemons. These citrus fruits got unprecedented success. Lind did not know that these citrus fruits have a vital nutrients, that later came to be known as Vitamin C.

## Cooked and Raw Food

We eat some food items raw and some after cooking them. Mostly fruits are eaten raw. We should wash a fruit before eating it so as to remove all the dirt, germs and chemicals on it.

We cook rice, grains, vegetables, eggs, meat etc. before eating. Cooking kills the germs that might be present in the raw food. Our body digests cooked food easily and it is tasty as well.

Before using any food items, whether we are eating it raw or cooking it, we must follow these tips :

- ❖ Wash fruits and vegetables before cutting them. If we wash them after cutting, the nutrients are washed away.
- ❖ Water in which we soak pulses and rice etc. contains nutrients so we can use it for cooking.
- ❖ Do not overcook the food as it destroys the nutrients in food.



Raw and cooked food

## Preservation of Food

If we leave the food unprotected for a long time, it becomes stale and bad. We cannot eat it as it is unhealthy for us. Storing food for a long time without getting it spoilt, is called the **preservation** of food.

There are some processes of preservation of food such as, drying, pickling, refrigerating, deep freezing and canning or bottling.

Grapes and nuts are preserved by drying for later use. This process is called **drying**.

Some vegetables, mango and lemon are preserved by adding oil and salt. This process is called **pickling**.

We preserve fruits and vegetables by **refrigerating**.



Meat, fish and cheese can be preserved for a few days by **deep freezing**.

Airtight cans and bottles are used to preserve sauces and jams. This is called **canning**.



A stock of preserved food

### Environment Friendly Steps

**Environment friendly** packaging of foods does not harm the environment. As :

- We can reuse the empty bottles and jars after cleaning them. So **reusable packaging** is environment friendly.
- **Biodegradable packaging** is easily mixes in soil or atmosphere. It would not increase garbage on earth.

### Let's Recall

**Fill in the blanks :**

1. \_\_\_\_\_ helps us in proper functioning of our digestive system.
2. We get various nutrients from \_\_\_\_\_ kinds of food.
3. \_\_\_\_\_ is the process of storing food for a long time without it getting spoilt.
4. \_\_\_\_\_ are dried for preservation.
5. Overcooking destroys the \_\_\_\_\_ in food.

### Flash On

- \* Our body needs nutrients contained in food to grow and become strong.
- \* Carbohydrates, fats, proteins, vitamins and minerals, roughage and water are needed by our body in right amount.
- \* A balanced diet contains all the nutrients in right amounts.
- \* Preservation is the process of storing food for a long time without it getting spoilt.

## Words to Know

<b>Carbohydrates</b>	: Energy giving food
<b>Fats</b>	: Nutrients necessary to keep our body warm
<b>Proteins</b>	: Body building food
<b>Balanced diet</b>	: Diet that contains all nutrients in right amounts
<b>Preservation</b>	: Process of storing food for later use
<b>Roughage</b>	: Substance that help to remove waste from our body.

## Exercise

### A. Tick (✓) the correct answer :

- Substances needed by the body for its proper functioning are called :  
(a) fast food  (b) water  (c) nutrients
- It provides energy to the body :  
(a) Carbohydrates  (b) Vitamins  (c) Proteins
- Nutrients needed to build the body are :  
(a) fats  (b) proteins  (c) minerals
- Deep freezing is used to preserve :  
(a) fish  (b) meat  (c) Both of these
- A healthy food tip is :  
(a) wash fruits before eating  (b) eat a balanced diet  (c) Both of these

### B. Fill in the blanks by choosing the words from the help box :

the sun, energy, energy giving, balanced diet, preservation

- Nutrients gives us \_\_\_\_\_ to do our everyday activities.
- A \_\_\_\_\_ contains all the nutrients in right amounts.
- Food rich in carbohydrates and fats is called \_\_\_\_\_ food.
- We get vitamin D from \_\_\_\_\_.
- \_\_\_\_\_ is the process of storing food for a long time without it getting spoilt.

### C. Write T for True and F for False statements :

- Our body needs roughage to remove waste.
- All the nutrients that our body needs come from only one kind of food.
- Preservation is the process of storing food for a long time without it getting spoilt.

4. The process of drying nuts and grapes is called picking.
5. We should eat all our food uncooked.



**D. Match the following :**

**Column A**

1. Protective food
2. Removes waste from the body
3. Nuts and oils
4. Grapes
5. Sauce

**Column B**

- (a) canning
- (b) fats
- (c) drying
- (d) roughage
- (e) protein

**E. Answer the following in short :**

1. Define nutrients.
2. From which food items do we get vitamin C?
3. What is a balanced diet?
4. Why do we preserve food?
5. How does roughage help us?

**F. Answer the following in detail :**

1. Why are carbohydrates, fats and proteins essential for our body?
2. What is the importance of vitamins and minerals?
3. Explain raw and cooked food? Why do we need to cook food?
4. Write some important tips to be followed before eating raw food and in cooking food.
5. Write different methods of preserving food.

**Practice Time**

**G. Make teams and collect pictures of various foods that have nutrients essential for our body.**

**Make a chart of a normal human diet that shows the degree of necessity of each nutrient in our body. Paste pictures too.**

**H. Your Turn :**

1. **Look for preserved food in your kitchen. Do you find any bottled or canned food or some pickle, or food kept in the refrigerator. Ask you mother about :**
  - For how long time these food items have been preserved?
  - For how much time they could remain edible?



Food	Method of Preservation	Preservation Period

2. Divide class in five groups. Each group will jot down the names of the food they ate the previous day. This list will show the diet of each group. Compare the diets and nutrition intake of each group.

### Have Fun

- ❖ In the following word search grid, spot and circle the names of five healthy and five junk food.

F	D	M	G	R	A	I	N	S	B	A	H	B	P	F
R	E	A	O	O	H	U	A	A	U	R	E	R	I	R
U	E	M	O	L	A	J	M	R	R	Y	E	S	Z	E
I	P	C	N	W	R	A	C	P	G	U	T	U	Z	N
T	U	H	U	Y	M	N	H	A	E	K	U	S	A	C
S	L	A	T	E	A	O	A	L	R	N	H	H	I	H
P	S	N	S	U	U	O	N	J	A	T	S	J	Y	F
T	E	D	N	O	H	D	D	I	C	A	R	K	A	R
A	S	T	E	E	T	L	U	J	H	A	A	L	H	I
N	R	A	S	G	A	E	A	A	I	R	T	H	A	E
A	M	J	R	M	A	S	Y	T	P	L	A	G	I	S
N	A	M	K	A	R	U	T	V	S	A	H	F	T	A
D	L	A	A	T	L	R	S	G	R	A	J	D	U	N
K	A	H	Y	J	N	A	H	Y	A	K	K	D	M	A
V	E	G	E	T	A	B	L	E	S	S	L	S	H	M